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Carlsmith's text at col. 9, lines 22-26 can be interpreted to mean that the boot, as well as the fame, is made of "glass reinforced nylon or similar material" and this interpretation is quite reasonable, since many skate boots are very stiff. Carlsmith's boot also includes "boot flanges 20L and 20R" (col. 9, line 36) along the sole, and these must be rigid, even if the rest of the boot is not, to support the user's instep and to allow the boot to rotate as a whole about the hinge 23.

In any event, whether it is stiff or not, the boot moves as whole relative to the frame. "The boot 62 and the frame 15 are primarily connected with a hinge," says Carlsmith (col. 9, line 35). "Braking action ... is accomplished when the skater pushes down with his or her *heel* on the boot 62. The *boot* rotates on the hinge [pin 23]" (col. 10, line 7; emphasis added). "Thus when the skater rocks the boot of the skate backward, the pressure on the *heel* of the boot is translated into pressure on the brake pads The amount of braking can be effectively modulated by modulating the pressure applied to the *heel*" (col. 10, lines 59-68; emphasis added).

The Examiner is invited to consider further Carlsmith's Fig. 5, which shows a detent located not far from the toe/metatarsal joint. If the Carlsmith skater were to raise his or her toes in the manner that the Applicant claims, then the result would likely be a reaction *downward* pressure on the detent. But a downward pressure would be contrary to the disclosure of Carlsmith, who states that the user must push down with the *heel* to disengage the detent and allow braking (col. 12, lines 8-10). Thus, according to Carlsmith, the Applicant's toe motion would not result in braking.

In summary, a close reading of Carlsmith demonstrates that in Carlsmith's skate, raising the toes relative to the metatarsals—while doing nothing else⁴—would not result in braking. Therefore the Applicant's claimed "toe motion *consisting of* an upward rotation of at least one phalanx bone of the toe relative to at least one metatarsal bone of the foot, while the user's foot is on the position, *the toe motion acting to actuate the brake*," is not anticipated.

⁴ Under the Applicant's "consisting of" language.

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(2) At the top of page 3 of the Office Action, the Examiner asserts that the axis of Carlsmith is adjacent to the metatarsal/phalanx joint. As is mentioned briefly above, this is respectfully submitted to be erroneous.

The Examiner is referred to Fig. 8-31 in the text pages attached to the Brief of December 12, 2002 (these text pages, already in the PTO file, are incorporated into this paper by reference), which shows the locations of the metatarsal/toe joints LMPJA, the ankle joint axis AJA, and the oblique midtarsal joint axis OMJA (the Examiner is invited to note that the OMJA axis is far dorsal of the metatarsal bones, as the figure shows). Carlsmith's drawing (Figs. 4 and 12) shows that its hinge shaft 23 (col. 9, lines 40-42) is, roughly, under the OMJA axis, and is arguably not under any part of the metatarsal bones, not even the dorsal ends of the metatarsals.

(3) At page 3, line 3 of the Office Action, the Examiner asserts that Carlsmith discloses brake actuation by a "natural" motion of the toe. This is true, but Carlsmith's "natural" motion is directly *opposite* to the Applicant's claimed "natural" motion.

Carlsmith states (col. 2, line 61) that "raising one's toes into the air while keeping one's heel on the ground [is] an unnatural motion for the foot." This is opposite to what is claimed. Carlsmith teaches *against* raising the toes relative to the heel (not relative to the metatarsal bones, as claimed—in the motion disclosed by Carlsmith, the metatarsals will also rise relative to the heel bone) at col. 2, line 58, and into the next column.⁵

(4) The Examiner asserts that Carlsmith discloses a lifter (page 2, 7th line from the bottom). The Applicant respectfully disagrees.

Carlsmith discloses a boot. To arbitrarily isolate one portion of the boot and call it a "lifter," when the reference itself does not isolate that portion for any purpose, does not use the word "lifter" or apply that word to *any* portion of the boot, and teaches contrary to using the arbitrary portion of the boot as a lifter (as argued above), is not supported in the reference.

⁵ Integnan, the reference formerly applied, teaches very strongly against braking by lifting the toes.

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Claims 31-34 were rejected under §103 over Carlsmith in view of TenEyck. This rejection is respectfully traversed on the grounds (by dependence) above and on the following grounds:

Carlsmith shows cylindrical disks on the sides of its wheels, and the brake shoes bear on the circumferences of these disks, called "brake drums 41" (col. 11, line 16). Thus, the Examiner's proposed motivation to avoid heat "caused by ... skating on hot surfaces" (page 3, last line) is not supported in the reference, because the brake parts do not touch the ground. Furthermore, the assertion of high temperatures is respectfully submitted to be unsubstantiated. The amounts of energy involved in skating are believed to be insufficient to cause very high temperatures; the Applicant has never seen a skate brake smoking.

Claim 39 was rejected under §103 over Carlsmith in view of Hoskin. This rejection is respectfully traversed on the grounds (by dependence) above and on the following grounds:

Hoskin does not disclose "a brake shoe that is pivoted to rotate about an axle of a first wheel, so as to bear against a second wheel." Hoskins discloses a brake shoe ("ground-engaging brake pad 64p," col. 5, line 46) that is pivoted to rotate about an axle of a first wheel (23w), so as to bear against *the ground*. The brake shoe 64p of Hoskin does not bear against any wheel. The Examiner applies roller 82r as anticipating another wheel, but this is traversed; it is a "roller" and not a "wheel" like wheel 23w, according to the terminology of Hoskin itself. Neither is it a brake shoe, because it is in "non-slipping, rolling contact" with the wheel 23w (col. 7, lines 1-10).

Furthermore, both references disclose different complicated mechanisms for the same purpose, braking, and this teaches against combination. Furthermore, the Applicant sees no expectation of success—it is not even clear *how* these mechanisms should be combined (not admitted), and clarification on this point is requested.

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The proposed motivation, to minimize brake wear, is respectfully traversed. Hoskin teaches dragging the brake shoe on rough cement (instead of Carlsmith's smooth brake drum 41) and therefore does not teach minimizing brake wear. If Carlsmith were to adopt Hoskin's teaching and put the brake pad against the ground, it would wear out more quickly, not less.

Withdrawal of the rejections is requested.

Respectfully submitted,



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*I certify that this correspondence is being facsimile transmitted to the United States
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